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Twenty-One Papers by Environmental Protection Agency Scientists are Recommended for Scientific and Technological Achievement Awards

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Washington, DC

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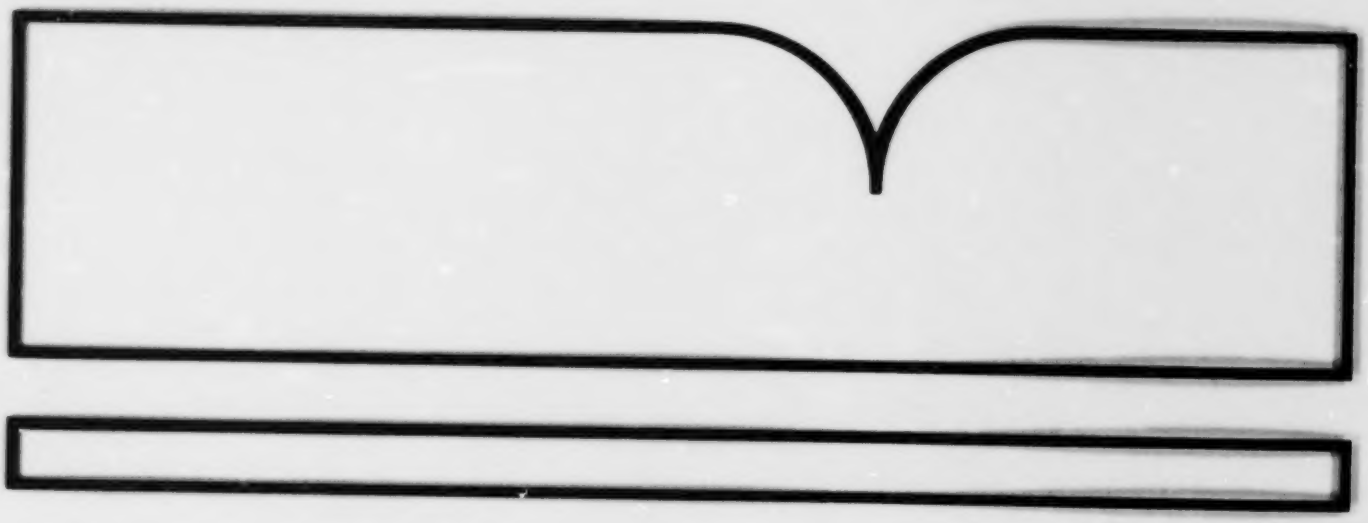

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The Science Advisory Board (SAB) reviewed 130 papers by Environmental Protection Agency scientists and recommended that 21 receive Scientific and Technological Achievement Awards and that authors of three other papers of notable quality be recognized through some other mechanism. The SAB was pleased that the call for papers was Agency-wide this year and hopes that other awards programs are used to recognize those papers and scientists of notable quality which do not otherwise meet the requirements of the STAAP. Such awards would be for excellence in reviews, data bases, special projects, and interlaboratory comparisons.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

April 27, 1988

SAB-EC-88-027

OFFICE OF
THE ADMINISTRATOR

Dr. Vaun Newill
Assistant Administrator
for Research and Development
401 M Street, S.W.
Washington, D.C. 20460

Dear Dr. Newill,

The Science Advisory Board's 1987 Scientific and Technological Achievement Awards Subcommittee has completed its review of 130 papers nominated by the Agency for awards. The enclosed memorandum from Kathleen Conway lists the Subcommittee's recommendations for awards and contains the Subcommittee roster.

Last year the Subcommittee recommended that the Scientific and Technological Achievement Awards Program (STAAP) be made an Agency-wide competition. We are pleased to learn the call for papers was Agency-wide this year and to report that a paper from the Office of Policy Analysis is recommended for an award. Widening the call for papers significantly increases the recognition Environmental Protection Agency employees receive for their contributions to good science.

The Subcommittee commends the Office of Research and Development for initiating and operating the STAAP. Because the STAAP recognizes only some types of good science performed at EPA (primarily bench research), the Subcommittee hopes that other types of high quality science responsive to EPA's needs are recognized through other awards programs.

We do not know if existing awards programs are actually utilized for this purpose. Other options would be the creation of a separate awards program or the creation of an additional category of awards within the STAAP program. As noted last year, such awards would be for excellence in reviews, data bases, special projects, interlaboratory comparisions and other scientific work which serves the Agency.

The Subcommittee identified three papers of notable quality which did not otherwise comply with STAAP criteria. The two papers by Costa are examples of excellent special projects conducted in response to an urgent need. The paper by Nesnow is an extensive and useful review of chemical carcinogens. The full citation for these three submissions follows:

"Functional Evidence of Persistent Airway Obstruction in Rats Following a Two-Hour Inhalation Exposure to Methyl Isocyanate," Environmental Health Perspectives, Vol. 72, pp. 89-94, 1987.
Eligible Author/s: Daniel L. Costa
Ineligible Author/s: Michael Stevens, Shelly Fitzgerald, John Bucher, and Margaret Menache

"Cardiopulmonary Effects in Awake Rats Four and Six Months after Exposure to Methyl Isocyanate," Environmental Health Perspectives, Vol. 72, pp. 95-103, 1987.
Eligible Author/s: Daniel L. Costa, William P. Watkinson, and Mildred J. Wiester
Ineligible Author/s: Jeffrey S. Tepper and Mary F. Webber

"Chemical Carcinogens: A Review and Analysis of the Literature of Selected Chemicals and the Establishment of the Gene-Tox Carcinogen Data Base. A Report of the U.S. Environmental Protection Agency Gene-Tox Program," Mutation Research, Vol. 185, pp. 1-196, 1987.
Eligible Author/s: HERL--Stephen Nesnow and Hinda Bergman; OPTS--Mary Argus; OHEA--Robert McGaughy
Ineligible Author/s: Ken Chu, Charles Frith, Tucker Helmes, Verne Ray, Thomas Slaga, Ray Tennant, and Elizabeth Weisburger

The Subcommittee hopes that you will be able to recognize these authors for their high-quality work.

Last year the Subcommittee recommended that non-EPA authors of award winning papers be sent letters of recognition. Such recognition of non-EPA authors should be a standard practice of the awards program.

The review process went smoothly. The six members who participated in last years deliberations provided considerable continuity. Most reviewers read papers in more than one area which provided consistency across the areas of health, ecology, transport & fate, monitoring & measurement, and control technology.

Over the years the Subcommittee has repeatedly voiced concerns over authorship, prior peer review, and the forms supporting the nominations. This year is no exception.

The Subcommittee is perplexed to see nomination forms which show a single EPA author as having provided 100% of the effort (and receiving 100% of the award) on a multi-author paper. Papers where the sole EPA author is last out of five or six authors also raise questions over the significance of the author's contribution to what may well be an excellent paper. While we recognize it is the Subcommittee function to identify those papers which are award worthy, you will understand it goes somewhat against the grain to contemplate an individual being recognized for an award-winning paper which was almost wholly the work of non-EPA authors. In your advice to the nominators next year, please stress the importance of accurately assessing the role of the EPA investigators before nominating a paper for these awards.

Similarly, the Subcommittee recognizes it must rely on the nominator to determine whether the paper has been published in the peer-reviewed literature. However, what constitutes peer-review varies from journal to journal and the thoroughness of peer-review is especially variable in the area of published proceedings. Please caution your nominators that the papers must themselves have been thoroughly peer-reviewed prior to publication and not merely appear in a publication which contains some peer-reviewed articles.

The nomination justifications are especially useful to the Subcommittee in determining how a particular study contributed to the Agency's mission. When well done they are extremely helpful. The nomination forms should show the percentage contribution of all authors (eligible and ineligible) and indicate, perhaps with an asterisk, those authors who are eligible for awards. The top page of the package should also give the complete citation of the paper with the authors in the correct sequence. Where the EPA author's contribution to the paper is small the nominator might wish to indicate whether that contribution was to the science (perhaps to the design of the study) or merely editorial, as last authorship so often indicates.

Subcommittee members sometimes have trouble distinguishing between the paper nominated this year and previous papers by the same author nominated in other years. If a related paper has received an award, please indicate this on the cover page of the nomination form.

Please let us know in writing of your decisions on the awards when they are given, please let us know whether you have chosen to recognize the non-EPA authors of award-winnng

papers, and please provide some information by laboratory and category on what percentage of peer-reviewed, published papers are nominated for awards. A description of EPA's awards programs and its criteria for awards would help the Subcommittee place the STAAP in perspective.

It has been a pleasure to participate in this review.

Norton Nelson, Chairman
Executive Committee
Science Advisory Board

Richard Kimerle, Chairman
1987 Scientific and Technological
Achievement Awards Subcommittee

Enclosure

cc: R. Morgenstern

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

April 26, 1988

OFFICE OF
THE ADMINISTRATOR

MEMORANDUM

SUBJECT: SAB Review of Papers Nominated for the 1987 Scientific and Technological Achievement Awards

FROM: Kathleen W. Conway, Deputy Director
Science Advisory Board

THRU: Donald G. Barnes, Director
Science Advisory Board

TO: Vaun Newill
Assistant Administrator
for Research and Development

The Science Advisory Board's 1987 Scientific and Technological Achievement Awards Subcommittee chaired by Dr. Richard Kimerle met February 11-12, 1988 and completed its review of the 130 papers transmitted to the Board for its recommendation. The Subcommittee judged the nominations in the light of the Statement of Principles and Processes (Revised 1987) attached your memorandum of October 7, 1987 A copy of this was given to the Subcommittee.

A listing of the Subcommittee's recommendations for awards is attached (Attachment I). Briefly, of the 130 papers nominated, 21 are recommended for awards. A table showing the number of recommended awards by category is attached (Attachment II). A Subcommittee Roster is also provided (Attachment III). For the first time, a paper by a non-ORD author has been recommended for an award.

The Subcommittee welcomed this opportunity to be of assistance to the Agency and to support your efforts to promote and recognize scientific and technological achievement by Agency employees. The Subcommittee had a number of comments and observations regarding this program which will be transmitted in a letter to you from the Chairman, Dr. Kimerle.

Attachments (3)

cc: R. Cortesi
L. Swaby
C. Bishop
D. Barnes
R. Kimerle

Attachment II

1987
Scientific and Technological Achievement Award Subcommittee

Recommendation for Awards

	Total Papers	Awards Level 3	Level 2	Level 1	Total
Control Technology	14	3	0	0	3
Ecology	19	4	0	0	4
Transport and Fate	25	3	1	0	4
Health	35	5	0	1	6
Monitoring and Measurement	37	4	0	0	4
	130	19	1	1	21

ENVIRONMENTAL PROTECTION AGENCY
SCIENCE ADVISORY BOARD
1987 SCIENTIFIC AND TECHNOLOGICAL
ACHIEVEMENT AWARD SUBCOMMITTEE
FEBRUARY 11-12, 1988

ROSTER

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Dr. Milagros Simmons, School of Public Health I, The University of Michigan, Room: 2512, Ann Arbor, Michigan 48108

EXECUTIVE SECRETARY

Mrs. Kathleen W. Conway, Deputy Director, Science Advisory Board, U.S. Environmental Protection Agency, 401 M Street, S.W. A-101F, Washington, D.C. 20460

STAFF SECRETARY

Ms. Renee' Butler, Science Advisory Board, U.S. Environmental Protection Agency, 401 M Street, S.W., A-101F Washington, D.C. 20460

RECOMMENDATIONS OF THE SCIENCE ADVISORY BOARD'S

SCIENTIFIC AND TECHNOLOGICAL ACHIEVEMENT

AWARDS SUBCOMMITTEE

1987

MONITORING AND MEASUREMENT METHODS

Office of Research and Development
Robert S. Kerr Environmental Research Laboratory
Ada, Oklahoma
Clinton W. Hall, Director

Level 3 Award

"Detection of a Microbial Consortium, Including Type II Methanotrophs, by Use of Phospholipid Fatty Acids in an Aerobic Halogenated Hydrocarbon-Degrading Soil Column Enriched with Natural Gas," Environmental Toxicology and Chemistry, Vol. 6 pp. 89-97, 1987.
Eligible Author/s: J. Michael Henson and John T. Wilson
Ineligible Author/s: Peter D. Nichols, Christopher P. Antworth, John Parsons, and David C. White

Office of Research and Development
Environmental Monitoring Systems Laboratory
Las Vegas, Nevada
Robert N. Snelling, Acting Director

Level 3 Award

MULTIPLE PAPERS TO BE CONSIDERED AS ONE PAPER:
"Methodology for Designing Air Quality Monitoring Networks: I. Theoretical Aspects," Environmental Monitoring and Assessment, Vol. 6, pp. 1-11, 1986.
Eligible Author/s: James L. McElroy and Jospeh V. Behar
Ineligible Author/s: M. K. Liu, J. Avrin, and R. I. Pollack

and

"Methodology for Designing Air Quality Monitoring Networks: II. Application to Las Vegas, Nevada, for Carbon Monoxide", Environmental Monitoring and Assessment, Vol. 6 pp. 13-34, 1986.
Eligible Author/s: James L. McElroy and Joseph V. Behar
Ineligible Author/s: M. K. Liu and T. C. Meyers

Office of Research and Development
Atmospheric Sciences Research Laboratory
Research Triangle Park, North Carolina
Alfred H. Ellison, Director

Level 3 Award

"Fluorescence Detection and Indentification of Nitro Derivatives of Polynuclear Aromatic Hydrocarbons by On-Column Catalytic Reduction to Aromatic Amines," Analytical Chemistry, Vol. 58, pp. 1827-1837, 1986.
Eligible Author/s: Silvestre B. Tejada, Roy Zweidinger, and John F. Sigsby, Jr.

Office of Research and Development
Environmental Research Laboratory
Corvallis, Oregon
Thomas A. Murphy, Director

Level 3 Award

"Measuring Genetic Stability in Bacteria of Potential Use in Genetic Engineering," Applied and Environmental Microbiology, Vol. 53, No. 1, pp. 105-109, 1987.
Eligible Author/s: Arlene Porteous and Ramon J. Seidler
Ineligible Author/s: Michael V. Walter

TRANSPORT AND FATE

Office of Research and Development
Robert S. Kerr Environmental Research Laboratory
Ada, Oklahoma
Clinton W. Hall, Director

Office of Research and Development
Environmental Monitoring Systems Laboratory
Las Vegas, Nevada
Robert N. Snelling, Acting Director

Jointly as Level 2 Award

"Lidar Observation of Elevated Pollution Layers over Los Angeles." Journal of Climate and Applied Meteorology, Vol. 25, No. 11, pp. 1583-1599, Novermber 1986.
Eligible Author/s: James L. McElroy
Ineligible Author/s: Roger M. Wakimoto

and

"Vertical Pollutant Distributions and Boundary Layer Structure Observed by Airborne Lidar Near the Complex Southern California Coastline." Atmospheric Environment, Vol. 20, No. 8, pp. 1555-1566, 1986.
Eligible Author/s: James L. McElroy
Ineligible Author/s: T. B. Smith

Office of Research and Development
Atmospheric Sciences Research Laboratory
Research Triangle Park, North Carolina
Alfred H. Ellison, Director

Level 3 Award

"The Structure of Strongly Stratified Flow over Hills: Dividing-Streamline Concept," Journal of Fluid Mechanics, Vol. 152, pp. 249-288, 1985.
Eligible Author/s: Roger S. Thompson
Ineligible Author/s: William H. Snyder, Robert E. Lawson, Jr., Robert E. Eskridge, Ian P. Castro, J. T. Lee, J. C. R. Hunt, and Yasushi Ogawa

Office of Research and Development
Environmental Research Laboratory
Duluth, Minnesota
Gilman D. Veith

Level 3 Award

"Toxicokinetic Modeling of [^{14}C] pentachlorophenol in the Rainbow Trout (Salmo gairdneri)." Aquatic Toxicology, Vol. 9, pp. 59-80, 1986.
Eligible Author/s: James M. McKim, Patricia K. Schmieder, and Russell J. Erickson

Office of Research and Development
Environmental Research Laboratory
Corvallis, Oregon
Thomas A. Murphy, Director

Level 3 Award

The Transport and Affinity of Substituted Benzenes in Soybean Stems." Journal of Experimental Botany, Vol. 38, No. 196, pp. 000-000, 1987.
Eligible Author/s: Joel K. McCrady and Craig McFarlane
Ineligible Author/s: F. T. Lindstrom

CONTROL SYSTEMS AND TECHNOLOGY

Office of Research and Development
Air and Energy Engineering Research Laboratory
Research Triangle Park, North Carolina
Frank T. Princiotta, Director

Level 3 Award — "Pore Distribution Changes of Calcium-Based Sorbents Reacting with Sulfur Dioxide," AIChE Journal, Vol. 33, No. 10, pp. 1719-1726 October 1987.
Eligible Author/s: Brian K. Gullett
Ineligible Author/s: Kevin R. Bruce

Level 3 Award — "Combustion Efficiency of Flares." Combustion Science and Technology, Vol. 50, pp. 217-231, 1986.
Eligible Author/s: Bruce A. Tichenor
Ineligible Author/s: John H. Pohl, Joannes Lee, and Roy Payne

Level 3 Award — "Effect of Specific Surface Area on the Reactivity of CaO with SO_2." AIChE Journal, Vol. 32, No. 2, pp. 239-246, February 1986.
Eligible Author/s: Robert H. Borgwardt
Ineligible Author/s: Kevin R. Bruce

ECOLOGY

Office of Research and Development
Environmental Research Laboratory
Narragansett, Rhode Island
Norbert A. Jaworski, Director

Level 3 Award — "Sediment Toxicity to a Marine Infaunal Amphipod: Cadmium and its Interaction with Sewage Sludge." Marine Environmental Research, Vol. 18, pp. 133-153, 1985.
Eligible Author/s: Richard C. Swartz, George R. Ditsworth Donald W. Schults, and Janet O. Lamberson

Office of Research and Development
Environmental Research Laboratory
Gulf Breeze, Florida
Henry F. Enos, Director

Level 3 Award — "Comparison of Laboratory Toxicity Test Results with Responses of Estuarine Animals Exposed to Fenthion in the Field," Environmental Toxicology and Chemistry, Vol. 6, pp. 151-160, 1987.
Eligible Author/s: James R. Clark, Patrick W. Borthwick, Larry R. Goodman, James M. Patrick, Jr., Emile M. Lores, and James C. Moore

Level 3 Award — "N-Nitrosodiethylamine-Induced Hepatocarcinogenesis in Estuarine Sheepshead Minnow (Cyprinodon variegatus): Neoplasms and Related Lesions Compared with Mammalian Lesions," Journal of the National Cancer Institute, Vol. 79, No. 2, August 1987.
Eligible Author/s: John A. Couch and Lee A. Courtney

Office of Research and Development
Environmental Research Laboratory
Corvallis, Oregon
Thomas A. Murphy, Director

Level 3 Award — "Correspondence Between Spatial Patterns in Fish Assemblages in Ohio Streams and Aquatic Ecoregions," Environmental Management, Vol. 10, No. 6, pp. 815-828, 1986.
Eligible Author/s: David P. Larsen and James M. Omernik
Ineligible Author/s: Robert M. Hughes, Christina M. Rohm, Thomas R. Whittier, Andrew J. Kinney, Alisa L. Gallant and Daniel R. Dudley

HEALTH EFFECTS

Office of Policy Analysis
Richard Morgenstern, Director

Level 3 Award — "The Relationship Between Blood Lead Levels and Blood Pressure and Its Cardiovascular Risk Implications," American Journal of Epidemiology, Vol. 121, No. 2, pp. 246-258, 1985.
Eligible Author/s: Joel Schwartz
Ineligible Author/s: James L. Pirkle, J. Richard Landis, and William R. Harlan

Office of Research and Development
Health Effects Research Laboratory
Research Triangle Park, North Carolina
F. Gordon Hueter, Director

Level 1 Award
"Lung Cancer and Indoor Air Pollution In Xuan Wei, China." Science, Vol. 235, pp. 217-220, 1987.
Eligible Author/s: HERL--Judy L. Mumford and Robert S. Chapman, AEERL-- D. Bruce Harris, ASRL--William E. Wilson
Ineligible Author/s: M. Cooke, J. C. Chuang, X. Z. He, S. R. Cao, X. M. Li, Y. L. Xian, W. Z. Jiang, and C. W. Xu

Level 3 Award
"The Induction of Supernumerary Ribs in Rodents: Role of the Maternal Stress," Teratogenesis, Carcinogenesis, and Mutagenesis." Vol. 6, pp. 419-429, 1986.
Eligible Author/s: Patricia E. (Parsons) Beyer and Neil Chernoff

Level 3 Award
MULTIPLE PAPERS TO BE CONSIDERED AS ONE PAPER:
"Airway Sensitivity of Asthmatics to Sulfur Dioxide," Toxicology and Industrial Health, Vol. 2, No. 3, pp. 289-298, 1986.
Eligible Author/s: Donald Horstman and Howard Kehrl
Ineligible Author/s: L. Jack Roger and Milan Hazucha

and

"Bronchoconstriction in Asthmatics Exposed to Sulfur Dioxide During Repeated Exercise," Journal of Applied Physiology, Vol. 59, No. 3, pp. 784-791, 1985.
Eligible Author/s: Donald Horstman and Howard Kehrl
Ineligible Author/s: L. Jack Roger and Milan Hazucha

Level 3 Award
"Diethyldithiocarbamate Increases Distribution of Cadmium to Brain But Prevents Cadmium-Induced Neurotoxicity," Brain Research, Vol. 370, pp. 354-358, 1986.
Eligible Author/s: James P. O'Callaghan
Ineligible Author/s: Diane B. Miller

Level 3 Award
MULTIPLE PAPERS TO BE CONSIDERED AS ONE PAPER:
"Fate of Adriamycin-Induced Dilated Renal Pelvis in the Fetal Rat: Functional and Morphological Effects in the Offspring," Teratology, Vol. 36, pp. 51-58, 1987.
Eligible Author/s: Robert J. Kavlock, Blair F. Rehnberg, and Ellen H. Rogers

and